

AMENDMENTS TO THE DRAWINGS

The attached sheet of drawings includes changes to Figure 1.

Figure 1 has been amended to include reference numeral 38, which is referenced in the Specification at least on page 8.

Attachment: Replacement sheet

REMARKS

In this Response, claims 1, 3-7, and 10-46 are currently pending, of which claims 1, 10, 32, and 38 are independent. Claims 1, 10, and 32-38 have been amended. Claim 7-9 are canceled by this Response and claim 2 has previously been canceled. No new matter has been added.

I. Amendments to the Claims

Claim 1 has been amended to better point out and clarify the scope of the invention. Support for this amendment may be found throughout the Specification, including at least on page 4, lines 10-13.

Claim 10 has been amended to better point out and clarify the scope of the invention. Support for this amendment may be found in the Specification, at least on page 12, lines 19-23.

Claims 32 and 38 have been amended to better point out and clarify the scope of the invention. Support for these amendments may be found throughout the Specification, including at least on page 4, lines 10-13.

II. Claim Objections

Claims 32-37 are objected to because “there is an error on the phrase ‘readable medium.’” Applicants have amended claims 32-37 to recite “readable storage medium,” as the Examiner requires. Accordingly, Applicants respectfully request the Examiner to reconsider and to withdraw the objection to claims 32-37.

Claim 7 is objected to because “there is an error on the phrase ‘comprising’.” Claim 7 has been canceled.

III. Summary of Claim Rejections

Claims 1-31 are rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement.

Claims 1 and 3-6 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,926,775 to Brumley et al. (hereinafter “Brumley”), in view of U.S. Patent Application Publication No. 2001/0047385 to Tuatini (hereinafter “Tuatini”), and further in view of U.S. Patent 5,764,546 to Bryant et al. (hereinafter “Bryant”).

Claims 10-14, 19-25, and 30 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Brumley, in view of U.S. Patent Application Publication No. 2004/0088349 to Beck et al. (hereinafter “Beck”), and further in view of Bryant.

Claims 15, 16, 18, and 26-29 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Brumley, in view of Beck, in view of Bryant, and further in view of U.S. Patent No. 6,614,916 to MacDonald (hereinafter “MacDonald”).

Claims 17 and 31 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Brumley, in view of Beck, in view of Bryant, and further in view of U.S. Patent No. 5,201,027 to Casini (hereinafter “Casini”).

Claims 32-42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brumley, in view of U.S. Patent No. 5,778,328 to Trsar et al. (hereinafter “Trsar”), and further in view of U.S. Patent Application Publication No. 2004/0119620 to Tran et al. (hereinafter “Tran”).

Claims 43, 44, and 46 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Brumley, in view of Trsar, in view of MacDonald, and further in view of Tran.

Claim 45 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Brumley, in view of Trsar, in view of Casini, and further in view of Tran.

IV. Rejections under 35 U.S.C. § 112, first paragraph

Claims 1-31 are rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement. The Examiner states that claims 1 and 10 “recite the feature “physical connection” which was not described in the specification” (Office Action, page 2, § 3). In order to further the prosecution of this Application, claims 1 and 10 have been

amended to remove the feature “physical connection.” Accordingly, Applicants respectfully request the Examiner to reconsider and to withdraw the 35 U.S.C. § 112 rejection of claims 1-31.

V. Rejections under 35 U.S.C. § 103(a)

A. Claims 1 and 3-6

Claims 1 and 3-6 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Brumley, in view of Tuatini, and further in view of Bryant (Office Action, page 3, § 6). Applicants respectfully traverse the above 35 U.S.C. § 103(a) rejection of claims 1 and 3-6 for at least the reasons set forth below.

Applicants respectfully submit that Brumley, Tuatini, and Bryant, alone or in any reasonable combination, do not disclose or suggest at least the following features of claim 1: “receiving a request to access the image acquisition device, the request specifying a format for a response from the image acquisition device,” “establishing a communication channel with a hardware interface of the image acquisition device, the communication channel operating independently of the interface protocol of the image acquisition device,” and “accessing a feature of the image acquisition device using the communication channel to receive the response in the specified format.”

The Examiner alleges that Brumley discusses “the request specifying a format for a response from the image acquisition device” but does not discuss receiving “the response in the specified format” (Office Action, page 4). Applicants respectfully submit, however, that it is not logical for a reference to disclose or suggest one of these two elements, but not the other. That is, the purpose of a request that specifies a format for a response is for the requesting object to receive a response in the specified format. Since the Examiner acknowledges that Brumley does not discuss “receiving the response in the specified format,” it is not logically consistent to conclude that Brumley discusses “specifying a format for a response from the image acquisition device.”

In fact, the cited portion of Brumley discusses including backwards compatibility for prior art DAQ driver invocations. Brumley states that if the DAQ user application’s call to the DAQ driver level software is a vectored call, then the Brumley DAQ driver level software

architecture system dispatches the call to the appropriate physical DAQ device (col. 11, lines 1-6). However, if the call is not a vectored call, a “prior art DAQ driver level software architecture implementation is used” (col. 10, lines 57-67). Thus, in Brumley, the format of the call dictates which driver is called, but the call itself does not specify anything about “a format for a response from the image acquisition device.” Tuatini and Bryant also do not disclose or suggest “the request specifying a format for a response from the image acquisition device.” Thus, Brumley, Tuatini, and Bryant, alone or in any reasonable combination, do not disclose or suggest this feature.

The Examiner further acknowledges that “Brumley and Tuatini do not teach establishing a communication channel with a hardware interface of the image acquisition device” (Office Action, page 5). Thus, it is only logical that neither Brumley nor Tuatini can disclose or suggest that such a communication channel operates independently of the interface protocol of the image acquisition device. Bryant also does not disclose or suggest “establishing a communication channel with a hardware interface of the image acquisition device, the communication channel operating independently of the interface protocol of the image acquisition device.” Thus, Brumley, Tuatini, and Bryant, alone or in any reasonable combination, do not disclose or suggest this feature.

Applicants note that the Examiner alleges that Brumley discusses that “the electronic device [is] independent of an interface protocol” (Office Action, pages 3-4). In the preamble of claim 1, however, the word *independently* modifies *accessing*, not *electronic device*. Thus, the Examiner’s arguments on this point are not relevant.

In addition, although the Examiner acknowledges that Brumley does not teach “establishing a communication channel with a hardware interface of the image acquisition device,” the Examiner alleges that Brumley discusses “accessing a feature of the image acquisition device using the communication channel” (Office Action, pages 4 and 5). Again, Applicants respectfully submit that it is not logical that Brumley could disclose or suggest “using the communication channel,” if Brumley does not discuss “establishing a communication channel with a hardware interface of the image acquisition device.”

Moreover, the cited portions of Brumley describe signal conditioning circuitry which is placed between transducers and a DAQ device. The signal conditioning circuitry is not a communication channel.

Furthermore, the entire phrase in claim 1 is “accessing a feature of the image acquisition device using the communication channel to receive the response in the specified format.” Thus, the communication channel is used to receive the response in the specified format. The Examiner acknowledges that Brumley does not teach this feature, but alleges that Tuatini teaches “receiving the response in the specified format” (Office Action, page 4). Applicants respectfully disagree.

Tuatini does not disclose or suggest a “communication channel with a hardware interface of the image acquisition device” because Tuatini does not discuss image acquisition devices. Thus, Tuatini does not disclose or suggest using such a communication channel to receive a response in the specified format. In addition, the combination of Brumley and Tuatini does not disclose or suggest “using the communication channel to receive the response in the specified format” since the Examiner acknowledges that neither Brumley nor Tuatini discuss “a communication channel with a hardware interface of the image acquisition device” (Office Action, page 5). Bryant does not cure the deficiencies of Brumley and Tuatini with respect to this feature because Bryant’s alleged communication channel does not “operate independently of the interface protocol of the image acquisition device.” Accordingly, Brumley, Tuatini, and Bryant, alone or in any reasonable combination, do not disclose or suggest this feature.

Given the numerous logical inconsistencies within the Examiner’s rejection of claim 1, Applicants respectfully submit that the Examiner has not set forth a reasonable prima facie case of obviousness under 35 U.S.C. § 103.

Claims 3-6 depend from and incorporate all of the features of claim 1. Accordingly, claims 3-6 are patentable for at least the same reasons as set forth above with respect to claim 1.

For at least the reasons set forth above, Applicants respectfully request the Examiner to reconsider and to withdraw the above 35 U.S.C. § 103 rejections of claims 1 and 3-6.

B. Claims 10-14, 19-25, and 30

Claims 10-14, 19-25, and 30 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Brumley, in view of Beck, and further in view of Bryant.

Applicants respectfully submit that Brumley, Beck, and Bryant, alone or in any reasonable combination, do not disclose or suggest at least the following features of claim 10: “establishing a first communication link between a user of the electronic device and an image acquisition engine, the first communication link operating independently of a hardware interface of the selected image acquisition device” and “establishing a second communication link between the image acquisition engine and an interface of the selected image acquisition device, the second communication link operating independently of the interface protocol of the selected image acquisition device to allow the user to communicate with the selected image acquisition device.”

The Examiner alleges that Brumley discusses a first communication link between a DAQ user application and an interpreter performing DAQ driver level functions (Office Action, page 6). The alleged link between the user application and the interpreter, however, is not operating “independently of a hardware interface of the selected image acquisition device,” as required by claim 10. Instead, Brumley’s interpreter is within a DAQ device object, and a DAQ device object is an object that corresponds “to [a] particular device installed in the DAQ system” (Brumley, Fig. 3; col. 7, lines 61-63). Thus, Brumley expressly teaches away from the DAQ device object operating independently of a hardware interface of the selected image acquisition device. Accordingly, Brumley does not disclose or suggest “a first communication link between a user of the electronic device and an image acquisition engine, the first communication link operating independently of a hardware interface of the selected image acquisition device.” Beck and Bryant do not cure the deficiencies of Brumley with respect to this feature. Thus, Brumley, Beck and Bryant, alone or in any reasonable combination, do not disclose or suggest this feature.

In addition, claim 10 recites “establishing a second communication link between the image acquisition engine and an interface of the selected image acquisition device, the second communication link operating independently of an interface protocol of the selected image acquisition device to allow the user to communicate with the selected image acquisition device”

(emphasis added). The Examiner, however, does not point out how the cited references disclose or suggest that the alleged second communication link is “operating independently of an interface protocol of the selected image acquisition device.” Thus, Applicants respectfully submit that the Examiner has not set forth a prima facie case of obviousness under 35 U.S.C. § 103.

The alleged second communication link between the interpreter and the plurality of mini driver primitives is not “operating independently of an interface protocol of the selected image acquisition device” because the interpreter and the mini driver primitives are components of the DAQ device object for the particular, selected acquisition device (Brumley, Fig. 3; col. 7, lines 61-63). In fact, the mini driver primitives “perform the low-level work that is hardware specific” (Brumley, col. 8, lines 44-45). Thus, Brumley teaches that the DAQ device object, which includes an interpreter and mini driver primitives, is configured specifically for a particular acquisition device, even though some of the code in the DAQ device object may be reused or shared between different DAQ device objects. Accordingly, Brumley does not disclose or suggest “establishing a second communication link between the image acquisition engine and an interface of the selected image acquisition device, the second communication link operating independently of an interface protocol of the selected image acquisition device to allow the user to communicate with the selected image acquisition device.” Beck and Bryant do not cure the deficiencies of Brumley with respect to this feature. Thus, Brumley, Beck and Bryant, alone or in any reasonable combination, do not disclose or suggest this feature.

Claims 11-14, 19-25, and 30 depend from and incorporate all of the features of claim 10. Accordingly, claims 11-14, 19-25, and 30 are patentable for at least the same reasons as set forth above with respect to claim 10.

For at least the reasons set forth above, Applicants respectfully request the Examiner to reconsider and to withdraw the above 35 U.S.C. § 103 rejections of claims 10-14, 19-25, and 30.

C. Claims 15, 16, 18, and 26-29

Claims 15, 16, 18, and 26-29 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Brumley, in view of Beck, in view of Bryant, and further in view of MacDonald.

Claims 15, 16, 18, and 26-29 depend from and incorporate all of the features of claim 10.

As discussed above with respect to claim 10, Brumley, Beck, and Bryant, alone or in any reasonable combination, do not disclose or suggest each and every feature of claim 10. For example, Brumley, Beck, and Bryant, alone or in any reasonable combination, do not disclose or suggest “establishing a first communication link between a user of the electronic device and an image acquisition engine, the first communication link operating independently of a hardware interface of the selected image acquisition device.” MacDonald does not cure the deficiencies of Brumley, Beck, and Bryant with respect to this feature. Thus, Brumley, Beck, Bryant, and MacDonald, alone or in any reasonable combination, do not disclose or suggest each and every feature of claim 10, and thus, of dependent claims 15, 16, 18, and 26-29.

For at least the reasons set forth above, Applicants respectfully request the Examiner to reconsider and to withdraw the above 35 U.S.C. § 103 rejections of claims 15, 16, 18, and 26-29.

D. Claims 17 and 31

Claims 17 and 31 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Brumley, in view of Beck, in view of Bryant, and further in view of Casini.

Claims 17 and 31 depend from and incorporate all of the features of claim 10.

As discussed above with respect to claim 10, Brumley, Beck, and Bryant, alone or in any reasonable combination, do not disclose or suggest each and every feature of claim 10. For example, Brumley, Beck, and Bryant, alone or in any reasonable combination, do not disclose or suggest “establishing a first communication link between a user of the electronic device and an image acquisition engine, the first communication link operating independently of a hardware interface of the selected image acquisition device.” Casini does not cure the deficiencies of Brumley, Beck, and Bryant with respect to this feature. Thus, Brumley, Beck, Bryant, and Casini, alone or in any reasonable combination, do not disclose or suggest each and every feature of claim 10, and thus, of dependent claims 17 and 31.

For at least the reasons set forth above, Applicants respectfully request the Examiner to reconsider and to withdraw the above 35 U.S.C. § 103 rejections of claims 17 and 31.

E. Claims 32-42

Claims 32-42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brumley, in view of Trsar, and further in view of Tran.

Applicants respectfully submit that Brumley, Trsar, and Tran, alone or in any reasonable combination, do not disclose or suggest at least the following features of claims 32 and 38: “automatically determining available types of triggers supported by a particular image acquisition device,” “providing information on the available types of triggers supported by the particular image acquisition device,” and “creating a communication channel with the particular image acquisition device, the communication channel operating independently of the interface protocol of the image acquisition device.”

The Examiner acknowledges that Brumley and Trsar do not “automatically determine available types of triggers supported by a particular image acquisition device,” but alleges that Tran discusses this feature (Office Action, page 13). Applicants respectfully disagree.

Tran describes a system for triggering multiple test and measurement devices synchronously. An image acquisition device is not a test or measurement device. Furthermore, the cited portions of Tran describe decoding of triggering events (Tran, ¶ [0022]). That is, event decoders are used to examine signals to determine whether a predefined triggering condition exists (Tran, ¶ [0019]). Applicants respectfully submit that determining when a triggering condition exists is not equivalent to “automatically determining available types of triggers supported by a particular image acquisition device.” Thus, Brumley, Trsar, and Tran, alone or in any reasonable combination, do not disclose or suggest this feature.

In addition, the Examiner acknowledges that Brumley does not discuss “providing information on the available types of triggers supported by the particular image acquisition device,” but alleges that Trsar discusses this feature (Office Action, page 12). Applicants respectfully disagree.

The Examiner points out that Trsar states that “the engine analyzer 10 supports all of the three standard types of triggering for digital display scopes in engine analyzers.” Digital display

scopes are not image acquisition devices. Instead, digital display scopes visually represent measurements of signals, so the images shown on a display scope are computed, not acquired, by the scope. In addition, mere support for triggering does not disclose or suggest that “information on the available types of triggers supported” is being provided.

The Examiner also cites Trsar, col. 7, lines 3-11, which describes a “Trigger Check routine.” However, the Examiner ignores the context of the routine, which is “to determine if a frame of data contains a trigger point” (Trsar, col. 7, lines 1-3). That is, Trsar’s Trigger Check routine determines whether or not a frame of data that has been captured by the data acquisition hardware contains a trigger point. Determining whether a frame of data contains a trigger point is not equivalent to “providing information on the available types of triggers supported by the particular image acquisition device.” Tran does not remedy the deficiencies of Brumley and Trsar with respect to this feature. Therefore, Brumley, Trsar, and Tran, alone or in any reasonable combination, do not disclose or suggest this feature.

Moreover, as discussed above with respect to claim 1, Brumley does not disclose or suggest “creating a communication channel with the particular image acquisition device, the communication channel operating independently of the interface protocol of the image acquisition device.” Both Trsar and Tran are silent with respect to this feature. Therefore, Brumley, Trsar, and Tran, alone or in any reasonable combination, do not disclose or suggest this feature.

Claims 33-37 depend from and incorporate all of the features of claim 32. Accordingly, claims 33-37 are patentable for at least the same reasons as set forth above with respect to claim 32.

Claims 39-42 depend from and incorporate all of the features of claim 38. Accordingly, claims 39-42 are patentable for at least the same reasons as set forth above with respect to claim 38.

For at least the reasons set forth above, Applicants respectfully request the Examiner to reconsider and to withdraw the above 35 U.S.C. § 103 rejections of claims 32-42.

F. Claims 43, 44, and 46

Claims 43, 44, and 46 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Brumley, in view of Trsar, in view of MacDonald, and further in view of Tran.

Claims 43, 44, and 46 depend from and incorporate all of the features of claim 38.

As discussed above with respect to claim 38, Brumley, Trsar, and Tran, alone or in any reasonable combination, do not disclose or suggest each and every feature of claim 38. For example, Brumley, Trsar, and Tran, alone or in any reasonable combination, do not disclose or suggest “automatically determining available types of triggers supported by a particular image acquisition device.” MacDonald does not cure the deficiencies of Brumley, Trsar, and Tran with respect to this feature. Thus, Brumley, Trsar, Tran, and MacDonald, alone or in any reasonable combination, do not disclose or suggest each and every feature of claim 38, and thus, of dependent claims 43, 44, and 46.

For at least the reasons set forth above, Applicants respectfully request the Examiner to reconsider and to withdraw the above 35 U.S.C. § 103 rejections of claims 43, 44, and 46.

G. Claim 45

Claim 45 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Brumley, in view of Trsar, in view of Casini, and further in view of Tran.

Claim 45 depends from and incorporates all of the features of claim 38.

As discussed above with respect to claim 38, Brumley, Trsar, and Tran, alone or in any reasonable combination, do not disclose or suggest each and every feature of claim 38. For example, Brumley, Trsar, and Tran, alone or in any reasonable combination, do not disclose or suggest “automatically determining available types of triggers supported by a particular image acquisition device.” Casini does not cure the deficiencies of Brumley, Trsar, and Tran with respect to this feature. Thus, Brumley, Trsar, Tran, and Casini, alone or in any reasonable

combination, do not disclose or suggest each and every feature of claim 38, and thus, of dependent claim 45.

For at least the reasons set forth above, Applicants respectfully request the Examiner to reconsider and to withdraw the above 35 U.S.C. § 103 rejections of claim 45.

CONCLUSION

In light of the above amendments and arguments, Applicants respectfully submit that all of the pending claims are in condition for allowance. Should the Examiner feel that a teleconference would expedite the prosecution of this application, the Examiner is urged to contact the Applicants' attorney at (617) 227-7400.

Please charge any shortage or credit any overpayment of fees to our Deposit Account No. 12-0080, under Order No. MWS-034RCE. In the event that a petition for an extension of time is required to be submitted herewith, and the requisite petition does not accompany this response, the undersigned hereby petitions under 37 C.F.R. §1.136(a) for an extension of time for as many months as are required to render this submission timely. Any fee due is authorized to be charged to the aforementioned Deposit Account.

Dated: May 4, 2009

Respectfully submitted,

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Attachment